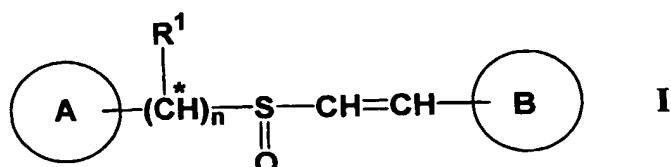


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CLAIMS

What is claimed is:

5 1. A compound according to Formula I:



wherein,

A is substituted or unsubstituted aryl, or substituted or unsubstituted heteroaryl;

10 B is substituted or unsubstituted aryl or substituted or unsubstituted heteroaryl, provided that when A and B are both phenyl, at least one of A or B is substituted;

n is 0 or 1;

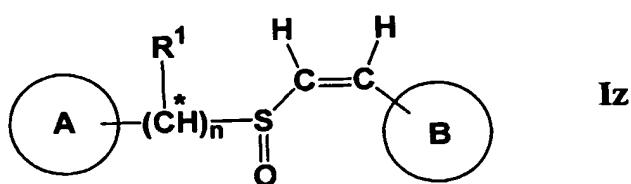
R¹ is -H, -(C₁-C₈)hydrocarbyl, -CN, -CO₂(C₁-C₆)alkyl or halo(C₁-C₆)alkyl;

15 the conformation of the substituents on the carbon-carbon double bond is either E- or Z-;

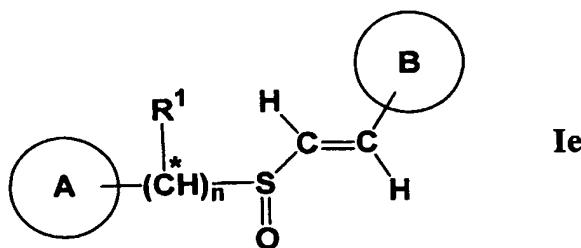
the conformation of the substituents on the sulfoxide sulfur atom is R-, S- or any mixture of R- and S-;

20 * indicates that, when R¹ is other than -H, the conformation of the substituents on the designated carbon atom is R-, S- or any mixture of R- and S-; or a salt of such a compound.

2. A compound according to claim 1 of Formula Iz:

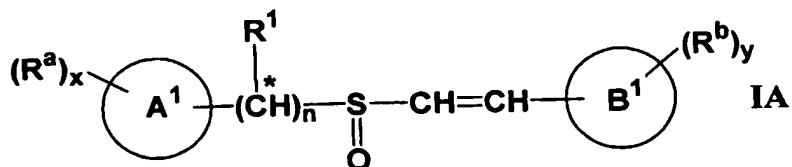


3. A compound according to claim 1 of the Formula Ie:



4. A compound according to claim 1 of Formula IA:

5



wherein:

A¹ and B¹ are independently aryl or heteroaryl;

10 x and y are independently 0, 1, 2, 3, 4 or 5, provided that the highest value of x or y is equal to the number of substitutable hydrogen atoms in the ring to which x or y is attached, and when A¹ and B¹ are both phenyl, the sum of x and y is greater than zero;

each R^a is independently selected from the group consisting of halogen;

15 -(C₁-C₈)hydrocarbyl, -C(=O)R², -NR²₂, -NHC(=O)R³, -NHSO₂R³, -NHR⁴, -NHCR²R⁴C(=O)R⁶, -C(=O)OR², -C(=O)NHR²; -NO₂, -CN, -OR², -P(=O)(OH)₂, dimethylamino(C₂-C₆)alkoxy, -NHC(=NH)NHR², -(C₁-C₆)haloalkyl, -(C₁-C₆)haloalkoxy and -N=CH-R⁷;

each R^b is independently selected from the group consisting of -(C₁-

20 C₈)hydrocarbyl, -C(=O)R², halogen, -NO₂, -CN, -OR², -C(=O)OR², -NR²₂, (C₁-C₆)haloalkyl and (C₁-C₆)haloalkoxy;

each R² is independently selected from the group consisting of -H and -(C₁-C₈)hydrocarbyl;

each R³ is independently selected from the group consisting of -H, -(C₁-C₈)hydrocarbyl, -O(C₁-C₈)hydrocarbyl, substituted and unsubstituted aryl,

substituted heterocyclyl(C₁-C₃)alkyl, heteroaryl(C₁-C₃)alkyl, -(C₂-C₁₀)heteroalkyl, -(C₁-C₆)haloalkyl, -CR²R⁴NHR⁵, -N(R²)₂, -(C₁-C₃)alkyleneNH₂, -(C₁-C₃)alkylene-N(CH₃)₂, -(C₁-C₃)perfluoroalkylene-N(CH₃)₂, -(C₁-C₃)alkylene-N⁺(C₁-C₃)₃, -(C₁-C₃)alkylene-N⁺(CH₂CH₂OH)₃, 5 -(C₁-C₃)alkylene-OR², -(C₁-C₄)alkylene-CO₂R², -(C₁-C₄)alkylene-C(=O)halogen, halo(C₁-C₃)alkyl-, -(C₁-C₃)alkylene-C(=O)(C₁-C₃)alkyl, and -(C₁-C₄)perfluoroalkylene-CO₂R²;

each R⁴ is independently selected from the group consisting of -H, -(C₁-C₆)alkyl, -(CH₂)₃-NH-C(NH₂)(=NH), -CH₂C(=O)NH₂, -CH₂COOH, -CH₂SH, 10 -(CH₂)₂C(=O)-NH₂, -(CH₂)₂COOH, -CH₂-(2-imidazolyl), -(CH₂)₄-NH₂, -(CH₂)₂-S-CH₃, phenyl, -CH₂-phenyl, -CH₂-OH, -CH(OH)-CH₃, -CH₂-(3-indolyl), and -CH₂-(4-hydroxyphenyl);

each R⁵ is independently selected from the group consisting of -H and a carboxy terminally linked peptidyl residue containing from 1 to 3 amino acids in 15 which the terminal amino group of the peptidyl residue is present as a functional group selected from the group consisting of -NH₂ and -NHC(=O)(C₁-C₆)alkyl, -NH(C₁-C₆)alkyl, -N(C₁-C₆)alkyl₂ and -NHC(=O)O(C₁-C₇)hydrocarbyl;

each R⁶ is independently selected from the group consisting of -OR² and an N-terminally linked peptidyl residue containing from 1 to 3 amino acids in 20 which the terminal carboxyl group of the peptidyl residue is present as a functional group selected from the group consisting of -CO₂R² and -C(=O)NR²; and

each R⁷ is independently selected from the group consisting of substituted and unsubstituted aryl and substituted and unsubstituted heteroaryl. 25

5. A compound according to claim 4 wherein the sum of x and y is greater than zero.

6. A compound according to claim 5 wherein A¹ is an aryl radical.

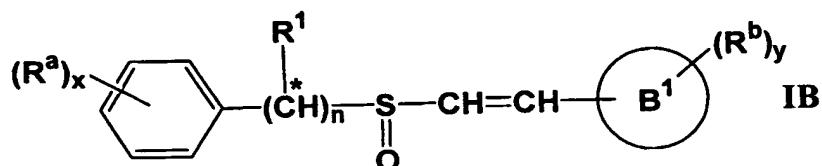
30

7. A compound according to claim 6 selected from the group consisting of: (1E)-2-(4-fluorophenyl)-1-[(naphthylmethyl)sulfinyl]ethene; (1E)-2-(4-chlorophenyl)-1-[(naphthylmethyl)sulfinyl]ethene; (1E)-2-(4-bromophenyl)-1-

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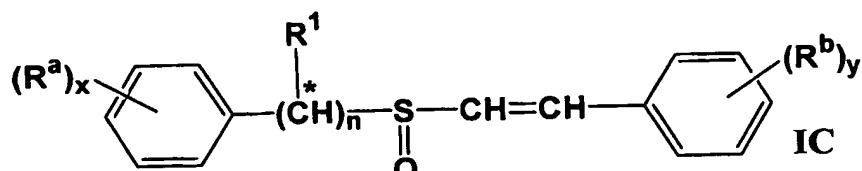
[(naphthylmethyl)sulfinyl]ethene; (1E)-2-(2-nitrophenyl)-1-[(naphthylmethyl)sulfinyl]ethene; (1E)-2-(3-nitrophenyl)-1-[(naphthylmethyl)sulfinyl]ethene; (1E)-2-(4-nitrophenyl)-1-[(naphthylmethyl)sulfinyl]ethene; and salts thereof.

5 8. A compound according to claim 6, of Formula IB:



9. A compound according to claim 8, wherein each R^a is independently selected from the group consisting of halogen, (C₁-C₆)alkyl, (C₁-C₆)alkoxy, 10 -NO₂, -CN, -C(=O)OR², -OH, -NH₂, (C₁-C₆)trifluoroalkoxy and -CF₃.

10. A compound according to claim 9, of Formula IC:



15 11. A compound according to claim 10 wherein each R^a and each R^b are independently selected from the group consisting of halogen, (C₁-C₆)alkyl, (C₁-C₆)alkoxy, -NO₂, -CN and -CF₃.

12. A compound according to claim 10 wherein the conformation of the 20 substituents on the carbon-carbon double bond is E-.

13. A compound according to claim 12 wherein x and y are independently 0, 1 or 2.

25 14. A compound according to claim 12 selected from the group consisting of: (1E)-1-{[(3-amino-4-methoxyphenyl)methyl]sulfinyl}-2-(2,4,6-trimethoxy-

phenyl)ethane; (1E)-1-{[(3-hydroxy-4-methoxyphenyl)methyl]sulfinyl}-2-(2,4,6-trimethoxyphenyl)ethane; (1E)-1-{[(4-methoxy-3-nitrophenyl)methyl]sulfinyl}-2-(2,4,6-trimethoxyphenyl)ethane; 2-{[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}-methyl)-2-methoxyphenyl]amino}sulfonyl)acetic acid; 2-5 {N-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}-methyl)-2-methoxyphenyl]carbamoyl}acetic acid; [5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]aminocarboxamide; 2-{[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]amino}acetic acid; N-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxy-10 phenyl](3,5-dinitrophenyl)carboxamide; N-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl](3,5-diaminophenyl)carboxamide; N-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-2-chloroacetamide; N-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-2-(4-methylpiperazinyl)acetamide; N-15 [5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-benzamide; N-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl](4-nitrophenyl)carboxamide; N-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl](4-aminophenyl)carboxamide; (1E)-1-[(3-[(1Z)-1-aza-2-(4-nitrophenyl)vinyl]-4-methoxyphenyl)methyl]-20 sulfinyl]-2-(2,4,6-trimethoxyphenyl)ethene; N-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl](2R)-2,6-diaminohexanamide; N-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl](2R)-2-amino-3-hydroxypropanamide; N-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl](2S)-2-amino-3-hydroxy-25 propanamide; N-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]aminoamide; (1E)-1-{[4-methoxy-3-(methylamino)phenyl]methyl}sulfinyl)-2-(2,4,6-trimethoxyphenyl)ethene; N-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]acetamide; [5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-30 [(2,4-dinitrophenyl)sulfonyl]amine; [5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl][(2,4-diaminophenyl)sulfonyl]amine; N-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-2-(dimethylamino)acetamide; 2-{[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]-

sulfinyl}methyl)-2-methoxyphenyl]amino}propanoic acid; *N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl][4-(4-methylpiperazinyl)phenyl]carboxamide; *N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-2-hydroxyacetamide; *N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-2-pyridylacetamide; {*N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]carbamoyl}methyl acetate; *N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-2-hydroxypropanamide; *N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-2-(triethylamino)acetamide; *N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-2-[tris(2-hydroxyethyl)amino]acetamide; *N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-2-hydroxy-2-methylpropanamide; 1-{*N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}-methyl)-2-methoxyphenyl]carbamoyl}-isopropyl acetate; *N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-2,2,2-trifluoroacetamide; [5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}-methyl)-2-methoxyphenyl][[(trifluoromethyl)sulfonyl]amine; 3-{*N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]carbamoyl}-propanoic acid; 3-{*N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}-methyl)-2-methoxyphenyl]carbamoyl}propanoyl chloride; 3-[({*N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}-methyl)-2-methoxyphenyl]carbamoyl}-methyl)oxycarbonyl]propanoic acid; 4-{*N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}-methyl)-2-methoxyphenyl]carbamoyl}butanoic acid; *N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-2-(phosphonoxy)acetamide, disodium salt; 4-{[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]amino}butanoic acid; 3-{[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-amino}propanoic acid; *N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]methoxycarboxamide; [5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl][[(4-methoxyphenyl)sulfonyl]amine; {*N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]carbamoyl}ethyl acetate; methyl-3-{*N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}-methyl)-2-methoxyphenyl]carbamoyl}-

propanoate; ethyl-2-{*N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}-methyl)-2-methoxyphenyl]carbamoyl}acetate; *N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-2,2,3,3,3-pentafluoropropanamide; methyl-2-{*N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]carbamoyl}-2,2-difluoroacetate; 3-{*N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}-methyl)-2-methoxyphenyl]-carbamoyl}-2,2,3,3-tetrafluoropropanoic acid; *N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-2-aminoacetamide; 2-{*N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}-methyl)-2-methoxyphenyl]-carbamoyl}-2,2-difluoroacetic acid; *N*-[5-({[(1E)-2-(2,4,6-trimethoxyphenyl)vinyl]sulfinyl}methyl)-2-methoxyphenyl]-2-(dimethylamino)-2,2-difluoroacetamide, 4-((1E)-2-{[(4-fluorophenyl)methyl]sulfinyl}vinyl)benzoic acid; 4-((1E)-2-{[(4-iodophenyl)methyl]sulfinyl}vinyl)benzoic acid; 4-((1E)-2-{[(4-chlorophenyl)methyl]sulfinyl}vinyl)benzoic acid; 1-[5-((1E)-2-{[(4-chlorophenyl)methyl]sulfinyl}vinyl)-2-fluoro-phenyl]-2-(dimethylamino)ethan-1-one; (1E)-2-(2,4-difluorophenyl)-1-{[(4-bromophenyl)methyl]sulfinyl}ethene; (1E)-2-(3-amino-4-fluorophenyl)-1-{[(4-chlorophenyl)methyl]sulfinyl}ethene; (1E)-1-{[(4-fluorophenyl)methyl]sulfinyl}-2-(2,3,4,5,6-pentafluorophenyl)-ethene; (1E)-1-{[(4-chlorophenyl)methyl]sulfinyl}-2-(2,3,4,5,6-pentafluorophenyl)ethene; (1E)-1-{[(4-bromophenyl)methyl]sulfinyl}-2-(2,3,4,5,6-pentafluorophenyl)ethene; (1E)-2-(4-fluorophenyl)-1-{[(2,3,4,5,6-pentafluorophenyl)methyl]sulfinyl}ethene; (1E)-2-(4-chlorophenyl)-1-{[(2,3,4,5,6-pentafluorophenyl)methyl]sulfinyl}ethene; (1E)-2-(4-bromophenyl)-1-{[(2,3,4,5,6-pentafluorophenyl)methyl]sulfinyl}ethene; (1E)-1-{[(3,4-dichlorophenyl)methyl]sulfinyl}-2-(2,3,4,5,6-pentafluorophenyl)ethene; (1E)-1-{[(4-iodophenyl)methyl]sulfinyl}-2-(2,3,4,5,6-pentafluorophenyl)ethene; (1E)-1-{[(4-fluorophenyl)methyl]sulfinyl}-2-(2-hydroxy-3,5-dinitrophenyl)ethene; (1E)-1-{[(4-bromophenyl)methyl]sulfinyl}-2-(2-hydroxy-3,5-dinitrophenyl)ethene; (1E)-1-{[(4-chlorophenyl)methyl]sulfinyl}-2-(2-hydroxy-3,5-dinitrophenyl)ethene; (1E)-1-{[(2,4-dichlorophenyl)methyl]sulfinyl}-2-(2-hydroxy-3,5-dinitrophenyl)ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(2,4,6-trimethoxyphenyl)ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(3-methyl-2,4-dimethoxyphenyl)ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(3,4,5-

trimethoxyphenyl)ethene; (1E)-1-{[(2-nitro-4,5-dimethoxyphenyl)methyl]-sulfinyl}-2-(3,4,5-trimethoxyphenyl)ethene; (1E)-1-{[(2-nitro-4,5-dimethoxyphenyl)methyl]sulfinyl}-2-(2,4,6-trimethoxyphenyl)ethene; (1E)-1-{[(2-nitro-4,5-dimethoxyphenyl)methyl]sulfinyl}-2-(3-methyl-2,4-dimethoxyphenyl)-ethene; (1E)-1-{[(4-fluorophenyl)methyl]sulfinyl}-2-(2,3,4-trifluorophenyl)-ethene; (1E)-1-{[(4-chlorophenyl)methyl]sulfinyl}-2-(2,3,4-trifluorophenyl)-ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(2,6-methoxy-4-hydroxyphenyl)ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(2,3,5,6-tetrafluorophenyl)ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(2,4,5-trimethoxyphenyl)ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(2,3,4-trimethoxyphenyl)ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(3-nitro-4-hydroxy-5-methoxyphenyl)ethene; (1E)-1-{[(4-methoxyphenyl)methyl]-sulfinyl}-2-(3,4-dimethoxy-6-nitrophenyl)ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(3,4-dimethoxy-5-iodophenyl)ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(2,6-dimethoxy-4-fluorophenyl)ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(2-hydroxy-4,6-dimethoxyphenyl)ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(2,4,6-trimethylphenyl)ethene; (1E)-1-{[(4-chlorophenyl)methyl]sulfinyl}-2-(2,4,6-trimethoxyphenyl)ethene; (1E)-1-{[(4-chlorophenyl)methyl]sulfinyl}-2-(2,6-dimethoxy-4-fluorophenyl)ethene; (1E)-1-{[(4-chlorophenyl)methyl]sulfinyl}-2-(2-hydroxy-4,6-dimethoxyphenyl)ethene; (1E)-1-{[(4-bromophenyl)methyl]sulfinyl}-2-(2,4,6-trimethoxyphenyl)ethene; (1E)-1-{[(4-bromophenyl)methyl]sulfinyl}-2-(2,6-dimethoxy-4-fluorophenyl)ethene; (1E)-1-{[(2,4,6-trimethoxyphenyl)methyl]sulfinyl}-2-(2,4,6-trimethoxyphenyl)ethene; (1E)-1-{[(2,3,4-trimethoxyphenyl)methyl]-sulfinyl}-2-(2,6-dimethoxyphenyl)ethene; (1E)-1-{[(3,4,5-trimethoxyphenyl)methyl]sulfinyl}-2-(2,6-dimethoxyphenyl)ethene; (1E)-1-{[(3,4,5-trimethoxyphenyl)methyl]sulfinyl}-2-(2,6-dimethoxyphenyl)ethene; (1E)-1-{[(3,4,5-trimethoxyphenyl)methyl]sulfinyl}-2-(4-fluorophenyl)ethene; (1E)-2-(4-fluorophenyl)-1-{[(4-(trifluoromethyl)phenyl)methyl]-sulfinyl}ethene; (1E)-2-(4-chlorophenyl)-1-{[(4-(trifluoromethyl)phenyl)methyl]-sulfinyl}ethene; (1E)-2-(4-bromophenyl)-1-{[(4-(trifluoromethyl)phenyl)methyl]-sulfinyl}ethene; (1E)-1-{[(2,4-dichlorophenyl)methyl]sulfinyl}-2-(4-fluorophenyl)ethene; (1E)-1-{[(2,4-dichlorophenyl)methyl]sulfinyl}-2-(4-chloro-phenyl)ethene; (1E)-1-

{[(3,4-dichlorophenyl)methyl]sulfinyl}-2-(4-fluoro-phenyl)ethene; (1E)-1-
{[(3,4-dichlorophenyl)methyl]sulfinyl}-2-(4-chloro-phenyl)ethene; (1E)-1-
{[(3,4-dichlorophenyl)methyl]sulfinyl}-2-(4-bromo-phenyl)ethene; (1E)-2-(4-
fluorophenyl)-1-{[(4-nitrophenyl)methyl]sulfinyl}-ethene; 4-{{[(1E)-2-(4-fluoro-
5 phenyl)vinyl]sulfinyl}methyl}benzene-carbonitrile; 4-{{[(1E)-2-(4-chloro-
phenyl)vinyl]sulfinyl}methyl}benzene-carbonitrile; 4-{{[(1E)-2-(4-bromo-
phenyl)vinyl]sulfinyl}methyl}benzene-carbonitrile; (1E)-2-(3,4-difluorophenyl)-
1-{{[(4-chlorophenyl)methyl]sulfinyl}ethene; (1E)-2-(3-chloro-4-fluorophenyl)-
1-{{[(4-chlorophenyl)methyl]sulfinyl}ethene; (1E)-2-(2-chloro-4-fluorophenyl)-
10 1-{{[(4-chlorophenyl)methyl]sulfinyl}ethene; (1E)-2-(2,4-dichlorophenyl)-1-
{{[(4-chlorophenyl)methyl]sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{[(4-
chlorophenyl)methyl]sulfinyl}ethene; (1E)-2-(2,3-dichlorophenyl)-1-{{[(4-
chlorophenyl)methyl]sulfinyl}ethene; (1E)-2-(4-fluorophenyl)-1-{{[(4-
15 iodophenyl)methyl]sulfinyl}ethene; (1E)-1-{{[(4-fluorophenyl)methyl]sulfinyl}-2-(4-
iodophenyl)-ethene; (1E)-1-{{[(4-chlorophenyl)methyl]sulfinyl}-2-(4-
iodophenyl)-ethene; (1E)-1-{{[(4-bromophenyl)methyl]sulfinyl}-2-(4-
iodophenyl)-ethene; (1E)-1-{{[(4-bromophenyl)methyl]sulfinyl}-2-(4-chlorophenyl)-ethene;
(1E)-2-(4-bromophenyl)-1-{{[(4-iodophenyl)methyl]sulfinyl}ethene; (1E)-1-{{[(4-
20 iodophenyl)methyl]sulfinyl}-2-(4-nitrophenyl)-ethene; (1E)-1-{{[(4-iodophenyl)-
methyl]sulfinyl}-2-(2-nitrophenyl)-ethene; (1E)-2-(4-iodophenyl)-1-{{[(4-
methoxyphenyl)methyl]sulfinyl}-ethene; (1E)-1-{{[(2,4-dichlorophenyl)methyl]-
sulfinyl}-2-(4-iodophenyl)-ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{[(4-chloro-
phenyl)methyl]sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{[(4-chloro-
phenyl)methyl]sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{[(4-chloro-
25 phenyl)methyl]sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{[(4-chloro-
phenyl)methyl]sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{[(4-chloro-
phenyl)methyl]sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{[(4-chloro-
phenyl)methyl]sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{[(4-chloro-
30 phenyl)methyl]sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{[(4-chloro-
phenyl)methyl]sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{[(4-chloro-
phenyl)methyl]sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{[(4-chloro-
phenyl)methyl]sulfinyl}ethene;

phenyl)methyl]-sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{(4-chloro-phenyl)methyl]-sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{(4-chloro-phenyl)methyl]-sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{(4-chloro-phenyl)methyl]-sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{(4-chloro-phenyl)methyl]-sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{(4-chloro-phenyl)methyl]-sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{(4-chloro-phenyl)methyl]-sulfinyl}ethene; (1E)-2-(3,4-dichlorophenyl)-1-{{(4-chloro-phenyl)methyl]-sulfinyl}ethene; (1E)-2-(2-nitrophenyl)-1-{{(4-fluorophenyl)-methyl]sulfinyl}-ethene; (1E)-2-(3-nitrophenyl)-1-{{(4-fluorophenyl)methyl]-sulfinyl}-ethene; (1E)-2-(4-nitrophenyl)-1-{{(4-fluorophenyl)methyl]sulfinyl}-ethene; (1E)-2-(2-trifluoromethylphenyl)-1-{{(4-fluorophenyl)methyl]sulfinyl}-ethene; (1E)-2-(3-trifluoromethylphenyl)-1-{{(4-fluorophenyl)methyl]-sulfinyl}-ethene; (1E)-2-(4-trifluoromethylphenyl)-1-{{(4-fluorophenyl)methyl]-sulfinyl}-ethene; (1E)-2-(2-trifluoromethyl-4-fluorophenyl)-1-{{(4-fluorophenyl)-methyl]-sulfinyl}ethene; (1E)-2-(2-nitrophenyl)-1-{{(4-chlorophenyl)methyl]sulfinyl}-ethene; (1E)-2-(3-nitrophenyl)-1-{{(4-chlorophenyl)methyl]sulfinyl}-ethene; (1E)-2-(4-nitrophenyl)-1-{{(4-chlorophenyl)methyl]sulfinyl}-ethene; (1E)-2-(2-trifluoromethylphenyl)-1-{{(4-chlorophenyl)methyl]-sulfinyl}ethene; (1E)-2-(3-trifluoromethylphenyl)-1-{{(4-chlorophenyl)methyl]-sulfinyl}ethene; (1E)-2-(4-trifluoromethylphenyl)-1-{{(4-chlorophenyl)methyl]sulfinyl}ethene; (1E)-2-(2-trifluoromethyl-4-fluorophenyl)-1-{{(4-chlorophenyl)-methyl]sulfinyl}ethene; (1E)-2-(3-methyl-4-fluorophenyl)-1-{{(4-chlorophenyl)methyl]-sulfinyl}ethene; (1E)-2-(2-nitrophenyl)-1-{{(2,4-dichlorophenyl)methyl]sulfinyl}-ethene; (1E)-2-(2-trifluoromethyl-4-fluorophenyl)-1-{{(2,4-dichloro-phenyl)methyl]sulfinyl}-ethene; (1E)-2-(2-nitrophenyl)-1-{{(4-bromophenyl)methyl]sulfinyl}ethene; (1E)-2-(3-nitrophenyl)-1-{{(4-bromophenyl)methyl]sulfinyl}ethene; (1E)-2-(4-nitrophenyl)-1-{{(4-bromophenyl)methyl]sulfinyl}ethene; (1E)-2-(2-trifluoromethylphenyl)-1-{{(4-bromophenyl)methyl]sulfinyl}ethene; (1E)-2-(3-trifluoromethylphenyl)-1-{{(4-fluorophenyl)methyl]sulfinyl}ethene; (1E)-2-(4-trifluoromethylphenyl)-1-{{(4-bromophenyl)methyl]sulfinyl}ethene; (1E)-2-(2-nitrophenyl)-1-{{(4-bromophenyl)methyl]sulfinyl}ethene; (1E)-2-(3-nitrophenyl)-1-{{(4-cyanophenyl)methyl]sulfinyl}ethene; (1E)-2-(4-nitrophenyl)-1-{{(4-cyanophenyl)methyl]sulfinyl}ethene; (1E)-2-(4-fluorophenyl)-1-{{(4-methylphenyl)-

methyl]sulfinyl}ethene; (1E)-2-(4-bromophenyl)-1-{{(4-methylphenyl)methyl]-sulfinyl}ethene; (1E)-2-(2-nitrophenyl)-1-{{(4-methylphenyl)methyl]sulfinyl}-ethene; (1E)-2-(3-nitrophenyl)-1-{{(4-methylphenyl)methyl]sulfinyl}ethene; (1E)-2-(4-nitrophenyl)-1-{{(4-methylphenyl)methyl]sulfinyl}ethene; (1E)-2-(4-fluorophenyl)-1-{{(4-methoxyphenyl)methyl]sulfinyl}ethene; (1E)-2-(4-chlorophenyl)-1-{{(4-methoxyphenyl)methyl]sulfinyl}ethene; (1E)-2-(4-bromo-phenyl)-1-{{(4-methoxyphenyl)methyl]sulfinyl}ethene; (1E)-2-(2-nitrophenyl)-1-{{(4-methoxyphenyl)methyl]sulfinyl}ethene; (1E)-2-(3-nitrophenyl)-1-{{(4-methoxyphenyl)methyl]sulfinyl}ethene; (1E)-2-(4-nitrophenyl)-1-{{(4-methoxy-phenyl)methyl]sulfinyl}ethene; (1E)-2-(4-chlorophenyl)-1-{{(4-nitrophenyl)-methyl]sulfinyl}ethene; (1E)-2-(4-fluorophenyl)-1-{{(4-nitrophenyl)methyl]-sulfinyl}ethene; and salts thereof.

15. A compound according to claim 10 wherein:

15 R^a is selected from the group consisting of chlorine, fluorine and bromine, and said R^a is bonded to the para position of the ring to which it is attached;

x is 0 or 1;

20 R^b is selected from the group consisting of chlorine, fluorine, bromine, methyl and methoxy, and said R^b is bonded to the ortho or para position of the ring to which it is bonded; and

y is 0, 1, 2 or 3.

16. A compound according to claim 15 wherein the conformation of the 25 substituents on the carbon-carbon double bond is E-.

17. A compound according to claim 16 selected from the group consisting of: (1E)-2-(2-chlorophenyl)-1-[benzylsulfinyl]ethene; (1E)-2-(4-chlorophenyl)-1-[benzylsulfinyl]ethene; (1E)-1-{{(4-chlorophenyl)methyl]sulfinyl}-2-(4-fluoro-phenyl)ethene; (1E)-2-(4-chlorophenyl)-1-{{(4-chlorophenyl)methyl]sulfinyl}-ethene; (1E)-2-(4-fluorophenyl)-1-{{(4-fluorophenyl)methyl]sulfinyl}ethene; (1E)-2-(2,4-difluorophenyl)-1-{{(4-fluorophenyl)methyl]sulfinyl}ethene; (1E)-1-{{(4-bromophenyl)methyl]sulfinyl}-2-(4-fluorophenyl)ethene; (1E)-2-(4-bromo-

phenyl)-1-{{(4-bromophenyl)methyl}sulfinyl}ethene; (1E)-2-(4-bromophenyl)-1-{{(4-fluorophenyl)methyl}sulfinyl}ethene; (1E)-1-{{(4-bromophenyl)methyl}sulfinyl}-2-(4-chlorophenyl)ethene; and salts thereof.

5 18. A compound according to claim 10, wherein:

each of R^a and R^b are independently selected from the group consisting of (C₁-C₆)alkyl, (C₁-C₆)alkoxy, halogen and nitro, and are bonded to the ortho or para position of the ring to which they are attached; and

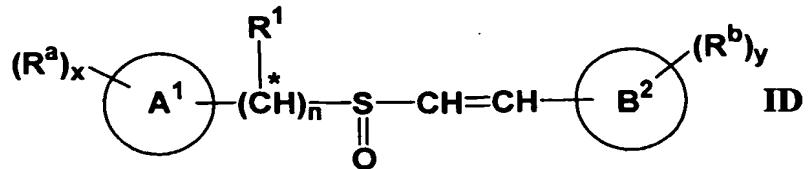
10 x and y are independently 0, 1, 2 or 3.

19. A compound according to claim 18 wherein the conformation of the substituents on the carbon-carbon double bond is Z-.

15 20. A compound according to claim 19 selected from the group consisting of:

(1Z)-2-phenyl-1-[benzylsulfinyl]ethene; (1Z)-1-{{(4-chlorophenyl)methyl}sulfinyl}-2-phenylethene; (1Z)-1-{{(2-chlorophenyl)methyl}sulfinyl}-2-phenylethene; (1Z)-1-{{(4-fluorophenyl)methyl}sulfinyl}-2-phenylethene; (1Z)-2-(4-chlorophenyl)-1-[benzylsulfinyl]ethene; (1Z)-2-(4-chlorophenyl)-1-{{(4-chlorophenyl)methyl}sulfinyl}-ethene; (1Z)-2-(4-chlorophenyl)-1-{{(2-chlorophenyl)methyl}sulfinyl}-ethene; (1Z)-2-(4-chlorophenyl)-1-{{(4-fluorophenyl)methyl}sulfinyl}-ethene; (1Z)-2-(4-fluorophenyl)-1-{{(2-chlorophenyl)methyl}sulfinyl}-ethene; (1Z)-2-(4-fluorophenyl)-1-{{(4-fluorophenyl)methyl}sulfinyl}ethene; (1Z)-2-(4-bromophenyl)-1-[benzylsulfinyl]ethene; (1Z)-2-(4-bromophenyl)-1-{{(4-chlorophenyl)methyl}sulfinyl}-ethene; (1Z)-2-(4-bromophenyl)-1-{{(2-chlorophenyl)methyl}sulfinyl}ethene; (1Z)-2-(4-bromophenyl)-1-{{(4-fluorophenyl)methyl}sulfinyl}ethene; (1Z)-2-(4-methylphenyl)-1-[benzylsulfinyl]ethene; (1Z)-2-(4-methylphenyl)-1-{{(4-chlorophenyl)methyl}sulfinyl}ethene; (1Z)-2-(4-methylphenyl)-1-{{(2-chlorophenyl)methyl}sulfinyl}ethene; (1Z)-2-(4-methylphenyl)-1-{{(4-fluorophenyl)methyl}sulfinyl}ethene; (1Z)-2-(4-fluorophenyl)-1-{{(4-iodophenyl)methyl}sulfinyl}-ethene; and salts thereof.

21. A compound according to claim 5, of Formula ID:



wherein B² is selected from the group consisting of heteroaryl and aryl other than phenyl.

5

22. A compound according to claim 21 wherein B² is heteroaryl.

23. A compound according to claim 21 wherein B² is selected from the group consisting of furyl, thienyl, pyrrolyl, thiazolyl, pyridyl, thienyl-1-dioxide, 10 anthryl, and naphthyl.

24. A compound according to claim 23 wherein the conformation of the substituents on the carbon-carbon double bond is E-.

15 25. A compound according to claim 24 wherein R^a is independently selected from the group consisting of halogen, (C₁-C₃)alkoxy, -CN, -NO₂, and -CF₃.

26. A compound of claim 25 selected from the group consisting of: (1E)-1-{{(4-fluorophenyl)methyl}sulfinyl}-2-(2-pyridyl)ethene; (1E)-1-{{(4-fluorophenyl)methyl}sulfinyl}-2-(3-pyridyl)ethene; (1E)-1-{{(4-fluorophenyl)methyl}sulfinyl}-2-(4-pyridyl)ethene; (1E)-1-{{(4-chlorophenyl)methyl}sulfinyl}-2-(2-pyridyl)ethene; (1E)-1-{{(4-chlorophenyl)methyl}sulfinyl}-2-(3-pyridyl)ethene; (1E)-1-{{(4-chlorophenyl)methyl}sulfinyl}-2-(4-pyridyl)ethene; (1E)-1-{{(4-bromophenyl)methyl}sulfinyl}-2-(2-pyridyl)ethene; (1E)-1-{{(4-bromophenyl)methyl}sulfinyl}-2-(3-pyridyl)ethene; (1E)-1-{{(4-bromophenyl)methyl}sulfinyl}-2-(4-pyridyl)ethene; (1E)-1-{{(4-fluorophenyl)methyl}sulfinyl}-2-(2-thienyl)ethene; (1E)-1-{{(4-chlorophenyl)methyl}sulfinyl}-2-(2-thienyl)ethene; (1E)-1-{{(4-bromophenyl)methyl}sulfinyl}-2-(2-thienyl)ethene; (1E)-2-(4-bromo(2-thienyl))-1-{{(4-fluorophenyl)methyl}sulfinyl}ethene; (1E)-2-(5-

bromo(2-thienyl))-1-{[(4-fluorophenyl)methyl]-sulfinyl}ethene; (1E)-2-(5-bromo(2-thienyl))-1-{[(4-chlorophenyl)methyl]-sulfinyl}ethene; (1E)-2-(5-bromo(2-thienyl))-1-{[(4-bromophenyl)methyl]-sulfinyl}ethene; 2-((1E)-2-{[(4-fluorophenyl)methyl]sulfinyl}vinyl)thiole-1,1-dione; 2-((1E)-2-{[(4-chlorophenyl)methyl]sulfinyl}vinyl)thiole-1,1-dione; 2-((1E)-2-{[(4-bromophenyl)methyl]sulfinyl}vinyl)thiole-1,1-dione; (1E)-1-{[(4-fluorophenyl)methyl]-sulfinyl}-2-(3-thienyl)ethene; (1E)-1-{[(4-chlorophenyl)methyl]sulfinyl}-2-(3-thienyl)ethene; (1E)-1-{[(4-bromophenyl)methyl]sulfinyl}-2-(3-thienyl)ethene; (1E)-1-{[(4-iodophenyl)methyl]sulfinyl}-2-(3-thienyl)ethene; (1E)-1-{[(4-methylphenyl)methyl]sulfinyl}-2-(3-thienyl)ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(3-thienyl)ethene; (1E)-1-{[(4-trifluoromethylphenyl)methyl]sulfinyl}-2-(3-thienyl)-ethene; (1E)-1-{[(2,4-dichlorophenyl)methyl]sulfinyl}-2-(3-thienyl)-ethene; (1E)-1-{[(3,4-dichlorophenyl)methyl]-sulfinyl}-2-(3-thienyl)-ethene; (1E)-1-{[(4-cyanophenyl)methyl]sulfinyl}-2-(3-thienyl)ethene; 3-((1E)-2-{[(4-fluorophenyl)methyl]sulfinyl}vinyl)thiole-1,1-dione; 3-((1E)-2-{[(4-chlorophenyl)methyl]sulfinyl}vinyl)thiole-1,1-dione; 3-((1E)-2-{[(4-bromophenyl)methyl]sulfinyl}vinyl)thiole-1,1-dione; 3-((1E)-2-{[(4-methoxyphenyl)methyl]sulfinyl}vinyl)thiole-1,1-dione; 3-((1E)-2-{[(2,4-dichlorophenyl)methyl]sulfinyl}vinyl)thiole-1,1-dione; (1E)-1-{[(4-fluorophenyl)methyl]sulfinyl}vinyl)thiole-1,1-dione; (1E)-1-{[(4-fluorophenyl)methyl]-sulfinyl}-2-(2-furyl)ethene; (1E)-1-{[(4-chlorophenyl)methyl]sulfinyl}-2-(2-furyl)ethene; (1E)-1-{[(4-bromophenyl)methyl]sulfinyl}-2-(2-furyl)ethene; (1E)-1-{[(4-fluorophenyl)methyl]sulfinyl}-2-(3-furyl)ethene; (1E)-1-{[(4-chlorophenyl)methyl]sulfinyl}-2-(3-furyl)ethene; (1E)-1-{[(4-bromophenyl)methyl]-sulfinyl}-2-(3-furyl)ethene; (1E)-1-{[(4-iodophenyl)methyl]sulfinyl}-2-(3-furyl)ethene; (1E)-1-{[(4-methylphenyl)methyl]sulfinyl}-2-(3-furyl)ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(3-furyl)ethene; (1E)-1-{[(4-trifluoromethylphenyl)methyl]sulfinyl}-2-(3-furyl)-ethene; (1E)-1-{[(2,4-dichlorophenyl)methyl]sulfinyl}-2-(3-furyl)-ethene; (1E)-1-{[(3,4-dichlorophenyl)methyl]-sulfinyl}-2-(3-furyl)-ethene; (1E)-1-{[(4-cyanophenyl)methyl]sulfinyl}-2-(3-furyl)ethene; (1E)-1-{[(4-nitrophenyl)methyl]sulfinyl}-2-(3-furyl)ethene; (1E)-1-{[(4-chlorophenyl)methyl]sulfinyl}-2-(1,3-thiazol-2-yl)ethene; (1E)-1-{[(4-chlorophenyl)methyl]sulfinyl}-2-pyrrol-2-ylethene; (1E)-1-

{[(4-bromophenyl)methyl]sulfinyl}-2-pyrrol-2-ylethene; (1E)-1-{[(4-chlorophenyl)methyl]sulfinyl}-2-(5-nitro(3-thienyl))ethene; (1E)-1-{[(4-iodophenyl)methyl]sulfinyl}-2-(5-nitro(3-thienyl))ethene; (1E)-1-{[(2,4-dichlorophenyl)methyl]sulfinyl}-2-(5-nitro(3-thienyl))ethene; (1E)-1-{[(4-methoxyphenyl)methyl]sulfinyl}-2-(5-nitro(3-thienyl))ethene; (1E)-1-{[(4-fluorophenyl)methyl]sulfinyl}-2-naphthylethene; (1E)-1-{[(4-fluorophenyl)methyl]sulfinyl}-2-(2-naphthyl)ethene; (1E)-1-{[(4-chlorophenyl)methyl]sulfinyl}-2-(2-naphthyl)ethene; (1E)-1-{[(4-bromophenyl)methyl]sulfinyl}-2-naphthylethene; (1E)-1-{[(4-bromophenyl)methyl]sulfinyl}-2-(2-naphthyl)ethene; (1E)-2-(9-anthryl)-1-{[(4-fluorophenyl)methyl]sulfinyl}ethene; (1E)-2-(9-anthryl)-1-{[(4-chlorophenyl)methyl]sulfinyl}ethene; (1E)-2-(9-anthryl)-1-{[(4-bromophenyl)methyl]sulfinyl}ethene; and salts thereof.

15 27. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a compound according to claim 1.

28. A conjugate of the Formula, I-L-Ab;
wherein:
20 I is a compound according to claim 1;
Ab is an antibody; and
-L- is a single covalent bond or a linking group covalently linking said compound to said antibody.

25 29. A conjugate according to claim 28 wherein said antibody Ab is a monoclonal antibody or a monospecific polyclonal antibody.

30 30. A conjugate according to claim 29 wherein said antibody Ab is a tumor-specific antibody.

30 31. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and at least one conjugate according to claim 28.

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32. A method of treating an individual for a proliferative disorder comprising administering to said individual an effective amount of a compound according to claim 1.
- 5 33. A method according to claim 32 wherein the proliferative disorder is selected from the group consisting of hemangiomatosis in newborn; secondary progressive multiple sclerosis; chronic progressive myelodegenerative disease; neurofibromatosis; ganglioneuromatosis; keloid formation; Paget's Disease of the bone; fibrocystic disease, sarcoidosis; Peronies and Duputren's fibrosis, 10 cirrhosis, atherosclerosis and vascular restenosis.
34. A method according to claim 32 wherein the proliferative disorder is cancer.
- 15 35. A method according to claim 34 wherein the cancer is selected from the group consisting of ovarian, breast, prostate, testicular, lung, renal, colorectal skin, and brain cancers, or the cancer is a leukemia.
- 20 36. The method of claim 35, further comprising administering an effective amount of therapeutic ionizing radiation to the individual.
37. A method of inducing apoptosis of tumor cells in an individual afflicted with cancer comprising administering to said individual an effective amount of a compound according to claim 1.
- 25 38. A method according to claim 37 wherein the tumor cells are selected from the group consisting of ovarian, breast, prostate, lung, colorectal, renal and brain tumors.
- 30 39. A method of treating an individual afflicted with cancer, comprising administering to said individual an effective amount of at least one conjugate according to claim 28.

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40. A method of reducing or eliminating the effects of ionizing radiation on normal cells in an individual who has incurred or is at risk of incurring exposure to ionizing radiation, comprising administering an effective amount of at least one radioprotective compound according to claim 1 to the individual prior to or 5 after exposure to ionizing radiation.

41. The method of claim 40 wherein the radioprotective compound is administered before the individual is exposed to the ionizing radiation.

42. The method of claim 41, wherein the radioprotective compound is administered at least about four hours before the individual is exposed to the 10 ionizing radiation.

43. The method of claim 42, wherein the radioprotective compound is administered no more than about twenty-four hours before the individual is exposed to the ionizing radiation.

44. The method of claim 43, wherein the radioprotective compound is 15 administered about eighteen and about six hours before the individual is exposed to the ionizing radiation.

45. The method of claim 40, wherein the radioprotective compound is administered after the individual is exposed to the ionizing radiation.

46. The method of claim 45, wherein the radioprotective compound is 20 administered between zero and six hours after the individual is exposed to the ionizing radiation.

47. A method of treating an individual for a proliferative disorder, comprising:

25 (a) administering to the individual an effective amount of at least one radioprotective compound according to claim 1; and

(b) administering an effective amount of therapeutic ionizing radiation.

48. The method of claim 47, wherein the proliferative disorder is cancer.

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49. A method of reducing the number of malignant cells in bone marrow of an individual, comprising:

- (a) removing a portion of the individual's bone marrow;
- (b) administering an effective amount of at least one radioprotective compound according to claim 1 to the bone marrow;
- (c) irradiating the bone marrow with an effective amount of ionizing radiation.

50. The method of claim 49, further comprising reimplanting the bone marrow into the individual.

10 51. The method of claim 49, wherein the individual receives therapeutic ionizing radiation prior to reimplantation of the bone marrow, and is administered at least one radioprotective compound of claim 1 prior to receiving the therapeutic ionizing radiation.

15 52. The method of claim 49 wherein the radioprotective compound is administered at least about 6 hours before exposure of the bone marrow to the ionizing radiation.

53. The method of to claim 49 wherein the radioprotective compound is administered about 20 hours before exposure to the ionizing radiation.

20 54. The method of claim 49 wherein the radioprotective compound is administered about 24 hours before exposure to the ionizing radiation.

25 55. A method for protecting an individual from cytotoxic side effects of the administration of a mitotic phase cell cycle inhibitor or a topoisomerase inhibitor comprising administering to the individual, in advance of administration of said inhibitor, an effective amount of at least one cytoprotective compound according to claim 1, wherein the mitotic phase cell cycle inhibitor or topoisomerase inhibitor is not a compound according to claim 1.

56. The method according to claim 55 wherein the mitotic phase cell cycle inhibitor is selected from the group consisting of vinca alkaloids, taxanes, naturally occurring macrolides, and colchicine and its derivatives.

57. The method according to claim 56 wherein the mitotic phase cell cycle inhibitor is selected from the group consisting of paclitaxel and vincristine.

58. The method according to claim 55 wherein the topoisomerase inhibitor is selected from the group consisting of camptothecin, etoposide and mitoxantrone.

59. The method according to claim 55 wherein the cytoprotective compound is administered at least about 1 hours before administration of the mitotic phase cell cycle inhibitor or topoisomerase inhibitor.

60. The method according to claim 59 wherein the cytoprotective compound is administered at least about 12 hours before administration of the mitotic phase cell cycle inhibitor or topoisomerase inhibitor.

61. The method according to claim 60 wherein the cytoprotective compound is administered at least about 24 hours before administration of the mitotic phase cell cycle inhibitor or topoisomerase inhibitor.

62. A method for treating cancer or other proliferative disorder comprising administering to an individual an effective amount at least one cytoprotective compound according to claim 1 followed by an effective amount of at least one mitotic phase cell cycle inhibitor or topoisomerase inhibitor after administration of the cytoprotective compound according to claim 1.

63. The method according to claim 62 wherein the mitotic phase cell cycle inhibitor is selected from the group consisting of vinca alkaloids, taxanes, naturally occurring macrolides, and colchicine and its derivatives.

25 64. The method according to claim 63 wherein the mitotic phase cell cycle inhibitor is selected from the group consisting of paclitaxel and vincristine.

65. The method according to claim 62 wherein the topoisomerase inhibitor is selected from the group consisting of camptothecin, etoposide and mitoxantrone.

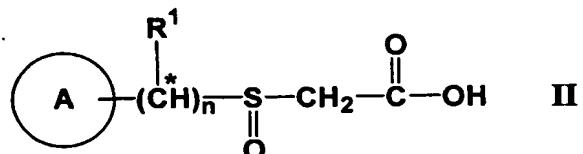
66. The method according to claim 62 wherein the cytoprotective compound is administered at least about 1 hour before administration of the mitotic phase 5 cell cycle inhibitor or topoisomerase inhibitor.

67. The method according to claim 66 wherein the cytoprotective compound is administered at least about 12 hours before administration of the mitotic phase cell cycle inhibitor or topoisomerase inhibitor.

68. The method according to claim 67 wherein the cytoprotective compound 10 is administered at least about 24 hours before administration of the mitotic phase cell cycle inhibitor or topoisomerase inhibitor.

69. A process for preparing a compound according to claim 3 comprising:

(a) reacting a compound of Formula II:

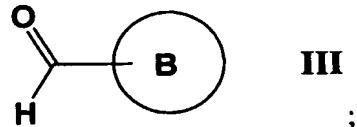


15 wherein A is substituted or unsubstituted aryl, or substituted or unsubstituted heteroaryl;

n is 0 or 1; and

R¹ is -H, -(C₁-C₈)hydrocarbyl, -CN, -CO₂(C₁-C₆)alkyl or halo(C₁-C₆)alkyl;

20 with a compound of Formula III:



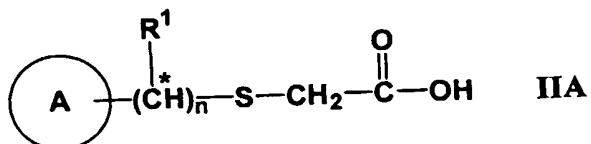
wherein B is substituted or unsubstituted aryl or substituted or unsubstituted heteroaryl; and

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(b) isolating a compound according to claim 3 from the reaction products.

70. A process according to claim 69 wherein the compound of Formula II is prepared by;

5 (a) reacting a compound of Formula IIA:

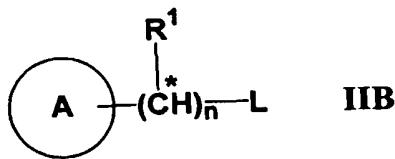


with an oxidizing agent capable of oxidizing a sulfide to a sulfoxide; and

(b) isolating a compound of Formula II from the reaction products.

71. A process according to claim 70 wherein the compound of Formula IIA is prepared by:

10 (a) reacting a compound of Formula IIB:



wherein:

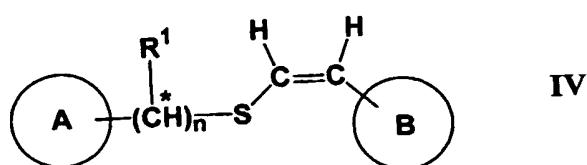
L is a leaving group;

15 with mercaptoacetic acid; and

(b) isolating a compound of Formula IIA from the reaction products.

72. A process for preparing a compound according to claim 2 comprising:

(a) reacting a compound of Formula IV:



20

wherein:

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A is substituted or unsubstituted aryl, or substituted or unsubstituted heteroaryl;

B is substituted or unsubstituted aryl or substituted or unsubstituted heteroaryl;

5 n is 0 or 1; and

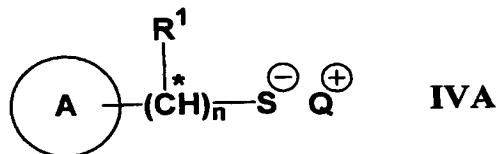
R¹ is -H, -(C₁-C₈)hydrocarbyl, -CN, -CO₂(C₁-C₆)alkyl or halo(C₁-C₆)alkyl;

with an oxidizing agent capable of oxidizing a sulfide to a sulfoxide; and

10 (b) isolating a compound according to claim 2 from the reaction products.

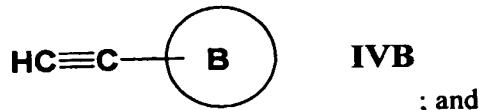
73. A process according to claim 72 wherein the compound of Formula IV is prepared by:

(a) reacting a compound of Formula IVA:



15 wherein Q⁺ is a counterion selected from the group consisting of alkali metals, alkaline earth metals and transition metals;

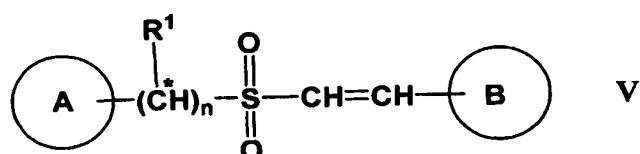
with a compound of Formula IVB:



; and

(b) isolating a compound of Formula IV from the reaction products.

20 74. A process for preparing a compound according to Formula V:



wherein:

A is substituted or unsubstituted aryl, or substituted or unsubstituted heteroaryl;

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B is substituted or unsubstituted aryl or substituted or unsubstituted heteroaryl, provided that when A and B are both phenyl, at least one of A or B is substituted;

n is 0 or 1;

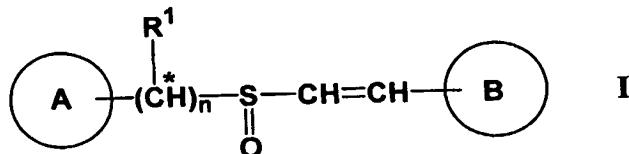
5 R¹ is -H, -(C₁-C₈)hydrocarbyl, -CN, -CO₂(C₁-C₆)alkyl or halo(C₁-C₆)alkyl;

the conformation of the substituents on the carbon-carbon double bond is either E- or Z-; and

10 * indicates that, when R¹ is other than -H, the conformation of the substituents on the designated carbon atom is R-, S- or any mixture of R- and S-; or a salt of such a compound;

comprising the steps of:

(a) reacting a compound according to Formula I:



15 wherein A, B, n, R¹ and * are so defined;

A is substituted or unsubstituted aryl, or substituted or unsubstituted heteroaryl;

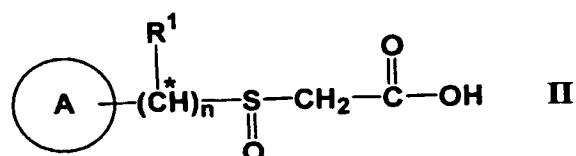
the conformation of the substituents on the carbon-carbon double bond is either E- or Z-; and

20 the conformation of the substituents on the sulfoxide sulfur atom is R-, S- or any mixture of R- and S-; or a salt thereof;

with an oxidizing agent capable of oxidizing a sulfoxide to a sulfone; and

(b) isolating a compound according to Formula V from the reaction products.

25 75. A compound according to Formula II:



wherein:

A is substituted or unsubstituted aryl other than unsubstituted phenyl, or substituted or unsubstituted heteroaryl;

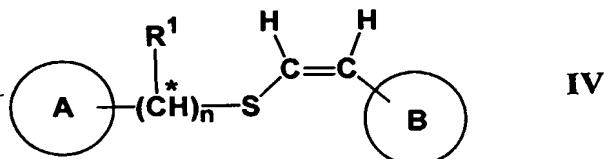
n is 0 or 1; and

5 R¹ is -H, -(C₁-C₈)hydrocarbyl, -CN, -CO₂(C₁-C₆)alkyl or halo(C₁-C₆)alkyl;

the conformation of the substituents on the sulfoxide sulfur atom is R-, S- or any mixture of R- and S-; and

10 * indicates that, when R¹ is other than -H, the conformation of the substituents on the designated carbon atom is R-, S- or any mixture of R- and S-; or a salt of such a compound.

76. A compound according to Formula IV:



wherein:

15 A and B are substituted or unsubstituted aryl other than unsubstituted phenyl, or substituted or unsubstituted heteroaryl;

n is 0 or 1; and

R¹ is -H, -(C₁-C₈)hydrocarbyl, -CN, -CO₂(C₁-C₆)alkyl or halo(C₁-C₆)alkyl;

20 the conformation of the substituents on the sulfoxide sulfur atom is R-, S- or any mixture of R- and S-; and

* indicates that, when R¹ is other than -H, the conformation of the substituents on the designated carbon atom is R-, S- or any mixture of R- and S-; or a salt of such a compound.

25 77. An isolated optical isomer of a compound according to claim 1.